

CLAIMS

What is claimed is:

1. A data link system comprising:
 - a shelter housing sensitive radio frequency equipment;
 - an antenna assembly located apart from the shelter; and
 - a single fiber, bi-directional fiber optic link coupling the antenna to the shelter, wherein both RF signals and data signals can be sent across the data link.
2. The system of claim 1 wherein the radio frequency equipment is located off the antenna.
3. The system of claim 1 wherein the system is adapted to use wavelength division multiplexing for the transfer of the RF signals and data signals.
4. The system of claim 1 wherein the system is adapted to send command link RF, return link RF, command and status signals over the fiber optic link.
5. The system of claim 1 further comprising fiber optic rotary joints adapted to pass the fiber optic link through antenna gimbals and a wavelength division multiplexing system to the antenna.

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13. A data link system adapted to carry command link and return link command and status comprising:

an antenna radio frequency assembly located away from
the shelter;

a single fiber, fiber optic link connecting the shelter and the antenna radio frequency assembly; and

an enclosure coupled to the fiber optic link, and between the shelter and the antenna assembly, the enclosure including antenna motor controls and configurable add/drop multiplexers.

14. The system of claim 13 further comprising fiber optic rotary joints in the antenna assembly adapted to pass the fiber optic link through antenna gimbals and a wavelength division multiplexing system to the antenna radio frequency assembly, wherein command link radio frequency signals, return link radio frequency signals and status signals are passed over the single fiber.

